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## Measuring Learning Outcomes and Education for Sustainable Development: The new Education Development Goal

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### Introduction

At the time of writing, the Education and Lifelong Learning Sustainable Development Goal (SDG) is being negotiated within a global context, where standardised assessments have become a tool for global monitoring and, some argue (Fukuda-Parr *et al.* 2013; Sellar & Lingard 2013), global governance of education. The 2015-2030 education goal will be the first United Nations (UN) development goal to include targets for learning outcomes. Globally, most assessments, particularly those used in monitoring Education for All (EFA), focus on a narrow set of foundational skills in literacy and numeracy. This raises the question of how well the international preoccupation with measuring learning as an outcome of education, serves the broader cross-sectoral agenda of sustainable development. To explore this question, this chapter draws on a social justice framework for education quality and key ideas on learning from the literature on education for sustainable development (ESD). This paper explores the extent to which they are compatible by adopting social justice framework for understanding education quality for all. The framework was designed to clarify the meaning and evaluation of education quality at a time when the development objectives were dominated by rights-based and human capital notions of development. So, attention is also given to the limitations of the framework and how it may be adapted to evaluate policies for promoting education quality that contributes to sustainable development.

At the time of writing, the final ratification of the sustainable development goals (SDGs) is mere months away. They are widely expected to conform closely to the proposal of the Open Working Group for Sustainable Development Goals (Open Working Group for Sustainable Development Goals, 2014) (hitherto, OWG proposal), appointed by the United Nations' General Assembly. The overarching goal is to ensure inclusive and equitable quality education and promote life-long learning opportunities for all. Learning outcomes have a prominent place within the goal. The first of its eight associated targets aims for all girls and boys to complete free and equitable primary and secondary education leading to relevant and effective learning outcomes. Three other targets are also expressed in terms of outcomes. These include knowledge and skills to promote sustainable development for all learners; literacy and numeracy for youth and adults; and skills for work for youth and adults.

The chapter starts by charting the rise in recent years of a learning agenda within the international EFA movement and how measures of learning outcomes are used to monitor

and implement EFA. The second part of the chapter turns to a social justice conceptualisation of education quality to present a broader account of educational outcomes in terms of benefits to individuals and society. The framework is expanded through engagement with key ideas on learning in the literature on ESD. The chapter concludes by commenting on the learning that we, as educational experts, will have to pursue over the next 15 years if EFA is to promote social justice and sustainability.

## The rise of the learning agenda within EFA

In the lead up to 2015, the formulation of a new goal for education has been the subject of debate and international consultations. Measurement and its learning has been a persistent theme in this debate. The American think-tank, the Brookings Institute, was an influential advocate for monitoring learning outcomes, placing the 'learning agenda' centre-stage early through its high profile report 'A global compact on learning' (Center for Universal Education at Brookings, 2011). In the same year, the World Bank headlined learning theme in its 2020 Education Strategy, 'Learning for All' (World Bank 2011). The need to focus on 'learning' and not just enrolment in schools continued to be consistently raised in a series of global consultations conducted by various UN bodies and a coalition of civil society organisations (Beyond2015, 2013; High-Level Panel, 2013; UNICEF/UNESCO, 2013; United Nations Development Group (UNDG), 2013). Behind this powerful consensus lay the recognition of a 'learning crisis' (UNESCO, 2013), a crisis made apparent by the multiplying assessments of literacy and numeracy. The EFA Global Monitoring Report (EFA GMR) synthesized findings from large-scale international and regional education assessments of learning to conclude that out of 650 million primary school age children worldwide, at least 250 million do not learn the basics in reading and mathematics by the end of grade four (UNESCO, 2014). Indeed, nearly half of these never reach grade four. This is largely a crisis of learning in low and middle-income countries. Three-quarters of children, who go to school but do not learn to read, live in South and West Asia or sub-Saharan Africa.

The 'learning crisis' discourse may be viewed as the product of a circular reinforcement between data availability and agenda setting. Analysis of data from the Programme for International Student Assessment (PISA) and other international and regional learning assessments quantified the prevalence of low achievement, particularly in literacy and numeracy, leading to talk of a 'learning crisis' and emergence of the learning agenda within EFA. Various actors responded by further proliferating learning assessments in order to understand the 'learning crisis' better. The phenomenon to which the term 'learning crisis' refers is not new but had previously been framed as a problem of poor quality education. For approximately the first half to the Millennium Development Goal (MDG) era, the talk was of quality with UN organisations and non-governmental organisations proposing frameworks for conceptualising and setting expectations for quality (GCE, 2002; Inter-Agency Task Team (IATT) on Education, 2006; Myers, 2004; UNESCO, 2004; UNICEF, 2008). These frameworks were explicitly based in a rights-based approach to development, some claiming the Convention on the Rights of the Child (UN, 1989) as their point of departure (e.g. UNICEF, 2004). They centred on 'the learner' and the fulfilment of her rights to education, within education and through education. Hence, learning outcomes were

positioned as just one facet of a multidimensional understanding of quality that also took account of participation, inputs and educational processes.

Filmer, Hasan and Pritchett (2006), economists of education, associated with the Center for Global Development, another think-tank in the United States, were the first to propose that the enrolment plus quality MDG agenda could be replaced by a learning goal with targets for measurable learning outcomes set at a regional or national level. They demonstrated the feasibility of their proposal through analysis of the PISA data from eleven middle- to high-income countries. However since 2006, an explosion in learning assessments broadened out the choice of data sources. Winthrop et al. (2015) note the increasing numbers of mainly middle income countries participating in international large-scale educational assessments, such as OECD's PISA; the emergence of what Wagner (2011) refers to as hybrid assessments of literacy and numeracy, usually conducted by civil society organisations with external financial backing; and the remarkably rapid uptake of Early Grade Reading Assessments (EGRA). Dubeck and Gove (2015), researchers with RTI International, the independent research organisation in California that designed and promoted EGRA, claim that it has been adapted for implementation in 65 countries, often implemented with financial backing of USAID. The latest EFA Global Monitoring Report also notes an increase in the number of national surveys of learning from 12 in 1990 to 101 in 2013, 64 of which were conducted in low or middle income countries (EFA Global Monitoring Report team, 2015). Much of this new activity in assessing learning measures skills in literacy and mathematics.

This new data on students' test performance has been used in three ways, which often overlap or work in tandem with each other. These are to inform policy and practice and sometimes to influence policy debates and decision-making; to hold governments to account for the quality of education they deliver; and to monitor progress towards equity in education. The EGRAs in particular have been used in the first way and the proliferation of their use is closely associated with heavy investment by USAID in improving literacy instruction in the early years. In some places it has been used as a diagnostic tool to identify the specific 'missing' reading skills and design teacher training to address these (Dubeck & Gove, 2015; Dubeck, Jukes, Brooker, Drake, & Inyega, 2015). Some researchers have drawn out policy recommendations from analysis of EGRA data. For example, Piper, Schroeder, & Trudell (2015) analysis compared results from EGRA tests conducted in different languages to deduce implications for the use of mother tongue and introduction of languages of wider use in education. Overall, EGRA has been instrumental in directing international aid and national or local interventions towards strengthening literacy and numeracy teaching in the early years of primary education.

The use of assessments accountability is illustrated by Languille's (2014) case study of development partners deployment of results-based management strategies in Tanzania. They scored the government's performance in improving education quality according to results from national examinations and the hybrid assessment, Uwezo, were used to. Languille shows how the logic of results-based management infuses the relationship between donors and recipient government, becoming a mechanism for external influence on policy. She also identifies the actors involved with the Uwezo study, showing how a network of international networks, fund and strengthen the influence of a study, sometimes

referred to as 'citizen-led assessment' (EFA Global Monitoring Report team, 2015; Winthrop et al., 2015). Languille argues that an international learning goal will intensify the practice of results-based management and with it the promotion of neo-liberal education policies.

The third use of findings, to probe educational equalities, arguably provides the strongest rationale for such assessments (Rose, 2015). It is demonstrated by the analysis of data of international and regional large-scale assessments reported in successive Education for All Global Monitoring Reports and. For example, analysis of PISA data reveals strong associations between the economic wealth of countries and students' performance in the PISA tests as well as between individuals in different income quintiles within a country (Bloem, 2013). The Uwezo survey has highlighted the magnitude of disparities in the measured reading ability of children living in rural and urban districts (Uwezo, 2010). The surveys have done much to make disparities in quality visible to policy makers, particularly at the international level.

A key feature of the global testing culture as it pertains to monitoring the education SDG is the narrow range of skills that are assessed, with an overwhelming focus on literacy and numeracy. Whilst large-scale studies have addressed other competencies, these are mainly, although not exclusively conducted by within OECD countries, or else are very specific in their focus. For example, the Southern and East African Consortium for Monitoring Education Quality (SACMEQ) included a HIV and AIDS Knowledge Test its 2007 study. When it comes to monitoring progress against Education for All, basic literacy and, to a lesser extent, numeracy have been the main focus. National surveys of learning often cover a wider range of skills and curricular subject areas, although with literacy and numeracy still being by far the most commonly assessed competencies (EFA Global Monitoring Report team, 2015).

## Learning and the education SDG

The concept of education quality within Education for All that preceded the emergence of learning agenda can be distilled into three ideas, inclusion or equity, relevance and participation. In previous work with Leon Tikly, we drew on the social justice theories of Amartya Sen (2009) and Nancy Fraser (2008) to more precisely define these concepts and give them a basis in moral philosophy (Tikly, 2011; Tikly & Barrett, 2011; Tikly & Barrett, 2013). Like other theorists using the capabilities approach (Unterhalter, 2005; Vizard, Fukuda-Parr, & Elson, 2011), we operated social justice theories to supplement and clarify rather than displace human rights. Since then, however, the international agenda for development has shifted significantly. The poverty reduction agenda that drove the MDGs has been broadened out into a sustainable development agenda that embraces environmental as well as economic and social progress. The Education for All targets of 2000 to 2015, which ran in parallel to the Education MDG, are enfolded within an Education and Lifelong Learning SDG. The target for universal primary education is replaced by a basic education target that looks for progress in relevant learning outcomes as well as enrolment.

In second part of this chapter, I evaluate the extent to which measurement of learning outcomes is fit for the purpose of monitoring education quality. The argument focuses on the two aspects of quality, equity and relevance, that are explicitly referenced in the OWG

proposal. I also consider how the sustainable development agenda expands the social justice framework.

### Equity and relevance from a social justice perspective

Equity in education, when informed by Sen's capability approach, is understood not as parity of access to educational institutions and resources but parity in terms of the opportunities these afford to individuals (Barrett, 2011; Tikly & Barrett, 2011). Evaluating equity in terms of benefits rather than provision rationalises targeting investment at groups historically marginalised within education systems. For example, individuals living with disabilities that affect their participation in education require the learning aids and extra support that enables them to benefit from educational programmes. Similarly, learners, who do not have fluency in a language of wider use, require mother tongue education or bi/multilingual education to enable learning across the curriculum include learning a language of wider use. This view of equity implies that outcomes are a more appropriate evaluative space for equity than enrolments (Barrett, 2011). Indeed, in the run-up to 2015, robust arguments have been put forward for using indicators for the basic education targets that disaggregate data from assessments of learning according to variables associated with marginalisation, such as rural/urban locality, socio-economic quintile and gender (Education for All Global Monitoring Report, 2013; EFA Steering Committee TAG on the post-2015 education indicators, 2014; Rose, 2015). Nonetheless, measures of learning outcomes are partial for two reasons. First, they focus on a narrow subset of the proficiencies acquired through schooling. Second, learning outcomes are not equivalent to benefits.

Unterhalter and Brighouse (2007) identify three types of benefits from education – intrinsic, instrumental and positional, arguing progress towards Education for All should be assessed using indicators for all three. Intrinsic benefits relate to the rewards of participating in education, irrespective of any gain that follows as a consequence. This is education as the ends of development, the intrinsic reward of exercising our senses, of imagining, thinking and reasoning that Nussbaum (2011) identifies as a central capability for human dignity and flourishing. Put more simply, it is learning for learning's sake. Following Nussbaum's reasoning, the opportunity to engage in learning, should be an entitlement across a lifetime. It may be fulfilled through formal, non-formal or informal education. Whilst life-long learning is now integrated into the Education SDG, it does not have a dedicated target and so is at risk of neglect (Langford 2012). However, as argued below, the ESD target may be interpreted to have implications for life-long learning.

Instrumental benefits of education are the capabilities acquired through education. This is education as the means of development. They include the skills, knowledge and values that enable a person to be socio-economically active and to participate constructively in society. Instrumental benefits relate to relevance. From a social justice perspective, a relevant education expands learners' capabilities for pursuing sustainable livelihoods and participating in the benefits of globalisation. Relevance concerns knowledge, skills and values for socio-economic participation (Tikly & Barrett, 2011). Additionally, it has a socio-cultural element. A relevant education also recognises the diverse socio-cultural identities of learners such as the cultural value to students of the languages they use outside of school, the history, indigenous knowledge, artistic and cultural life of their communities. Within the

Education SDG the target for skills for work addresses the economic dimension of relevance. Instrumental benefits relating to an individual's contribution to society are addressed through the ESD target. The socio-cultural recognition dimension of relevance is not explicitly addressed, although the reference to ESD and peace education may be interpreted to require recognition justice in education. Both the ESD and skills for work target construct education's role in enabling of instrumental benefits in terms of the skills and knowledge individual learners acquire.

Finally, positional benefits relate to the status that a person gains in society through dint of the titles, certificates and group memberships acquired through engaging in an education programme. This could be characterised as the social and symbolic capital accrued through education. The positional benefits of education play a profound role in reproducing or transforming social inequalities. Yet they are largely absent from debate around EFA with the important exception of basic literacy and numeracy skills, valued for enabling learners to claim their rights as citizens. So, for example, the adult literacy target in the Muscat proposal specifies 'literacy and numeracy to fully participate in society' (Global Education For All Meeting, 2014: 3). An analysis of the distribution of positional benefits of formal education for children and young people would need to look not just at learning surveys but consider how different groups perform in selective examinations, who transitions to successive levels of education and into various types of occupation.

From a social justice perspective, measures of learning give valuable on equity and inclusion provided data is disaggregated according to learners' characteristics. However, they are not on their own sufficient to monitor quality. In particular, a reliance on measure so learning overlooks or take for granted relevance of education.

### Learning within education for sustainable development

ESD, like human rights, is concerned with processes as well as outcomes from education. Indeed, Fien and Tilbury (2002) argue that sustainable development itself is not a product or outcome but a process. Like social justice theories, ESD aspires for learners to be agents in constructing a different trajectory for societies. However, to social transformation, ESD adds an environmental dimension. How the environmental dimension is framed varies. Bangay and Blum (2010) discuss the quality of education that prepares learners to face a future made uncertain by climate change. They argue that uncertainty demands that learners are equipped with skills such as critical thinking and problem solving, which can only be acquired through transformational learning that:

expand[s] the learner's understanding of him/herself and of the world around him/her, and potentially lead[s] to individual or social change. (Bangay & Blum, 2010: 363)

They critique oversimplified understandings within EFA of the relation between inputs, learning and social change. They point instead to a long tradition of educational research that explores the complexity of learning, including social-constructivist theories of learning and critical pedagogies.

Some sustainable development theorists call for a more radical view of learning for sustainable development. Scott & Gough (2010) highlight John Foster's contribution in



defining sustainable development as a process of social learning. For Scott & Gough, whose work focuses on ESD within formal education, this is the point of departure for arguing that ESD within each level of formal education should build on previous learning. It may equally be argued that sustainable development as social learning justifies life-long learning, conceived as ongoing participation across the lifetime in communities of inquiry. Morgan (2009) is sceptical of the potential of Western forms of schooling to support ESD as social learning but rather envisages its implementation through community-based globally minded action-based community projects. For Morgan, ESD is not just a matter of individual learning but about communities coming together to identify and resolve or ameliorate an issue of concern. The outcome of ESD therefore does not stop with individuals' acquisition of creativity, critical thinking or problem-solving skills but is seen in collaborative learning that intrinsic to transformative social actions. This view of learning, however, is compatible with social-constructivist theories of learning, highlighted by Bangay and Blum (2010), which view learning as participation in a community of inquiry. (Daniels ...). This line of reasoning highlights the limitations of considering only individual achievement as an outcome of education. It suggests that outcomes of learning also include collaborative achievements and actions, and the culture and operation of education institutions.

The scholarship on ESD presents a view of learning which is very distant from results-based logic that has influenced how global monitoring of education is conducted at the current time and has shaped the formulation of the education SDG targets. Indeed, it is probable that the ESD target, like the life skills EFA goal before it, will gain less traction than the other education targets. This is because ESD is not widely understood as a concept and measurable indicators have not been identified, making it unquantifiable (Rose 15). Over the lifetime of the education MDG and EFA goals, our understanding of quality and our capacity for measurement has changed. Indeed, the education SDG, including its associated metrics of learning, may be viewed as a product of that change. The new education SDG also contains within it the seeds of new possibilities for understanding and measuring quality. These new possibilities may be neglected or taken as signposts suggesting a direction of travel for our own collective learning as education experts. They set us a challenge for reconceptualising notions of education quality and reconstructing measurement of progress.

## Conclusion

By drawing on previous work on social justice perspectives on education quality and ideas about learning in the literature on education sustainable development, this chapter has pointed out some limitations of learning metrics for monitoring the new education SDG. Within the goal itself, there is a tension between an emphasis on learning test results as the evaluative space for quality and an overarching sustainable development agenda that dissolves the distinction between outcomes and processes. This tension relates in part to the assumptions that the individual as the unit for measuring progress and formal education institutions are the appropriate means for delivering learning. The logic of results-based management, which prevails within the international governance of education, leads inexorably to a focus on instrumental benefits to the individual. The overarching purpose of sustainable development, however, demands change through social learning. Certainly, measures of learning outcomes yield important information on inclusion and equity in



education and therefore, should continue to be a part of global monitoring. However, as we move into the future, their inadequacy for ensuring a quality of education that addresses contemporary challenges of social justice and sustainability may become ever more apparent.

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